noted, "A knowledge of anthropology enables us to look with greater freedom at the problems confronting our civilization" (1928:7).

Acknowledgments

We want to thank our many students, graduate and undergraduate, over the years. They have kept us working hard to seek ways to reveal the fundamental importance of global health and its complex connections to often unjust structures of human social relationships, a human mediated physical environment, human and other biologies, and the illusive but telling patterns of culture. As well, we thank the many people who have participated in our health research in several countries around the world, sharing with us, their insights, their heartfelt concerns, and, at times, their suffering. We also want to acknowledge and express appreciation for the significant help, good humor, and easy-to-work with styles of Jeni Ogilvie and Thomas Curtin from Waveland Press.

Chapter One

Global Health and the Anthropological Paradigm

We begin this chapter by introducing contemporary threats to global health and provide a brief history of the field of global health as it has evolved from interests in tropical medicine during colonial times to its present form. Next, we point out the goals of global health. Of considerable importance to understanding the field of global health is an awareness of the key players—the institutions, organizations, and agents of global health programming—and the philosophical perspectives that have shaped efforts intended to improve the health and well-being of the planet's human populations. Another key factor for understanding global health is the interplay between health and human rights. Central to global health issues are the social determinants of health and sickness, including the creation and maintenance of the wrenching health inequalities that characterize the contemporary "global community." We identify gaps in our understanding of global health issues and how these impact health and health experience in the contemporary world. We discuss changes in our **human habitat**, that is, our social, political, and ecological worlds that have accompanied the evolution of global health. The chapter ends with a detailed explanation of the anthropological approach and the advantages of using it to understand and address issues of global health.

THREATS TO GLOBAL HEALTH

In the 1990s, awareness of the impact of **globalization** shifted the focus to **global health**, which addresses "the health needs of the people of the whole planet above the concerns of particular nations" (Brown et al. 2006:62). The idea is that health issues now transcend national borders and create a "shared susceptibility to, experience of, and responsibility for health" that will be best addressed by cooperation among nations (Birn et al. 2009:6). Thus, there emerged a new way of thinking about and responding to the transnational health issues of human populations around the globe.

What are the pressing health issues in the world today? While there has been important progress on some indicators of global health, such as infant mortality and life expectancy, we still live in a world in which:

- More than eight thousand babies die every day before they are four weeks old.
- Almost 1.5 million children die of diarrheal diseases annually.
- Almost 287,000 women die in childbirth every year.
- More than 140,000 children die every year of measles.
- Over 1.4 million people die every year of tuberculosis (TB).
- In 2010 malaria infected 216 million people, killing 655,000.

Most of these threats to life are preventable and/or treatable, but they are not being adequately addressed and lead to disturbing disparities in health among regions of the world and subgroups of people. UNICEF reports that 26,500–30,000 children die every day because of poverty. They "die quietly in some of the poorest villages on earth, far removed from the scrutiny and the conscience of the world. Being meek and weak in life makes these dying multitudes even more invisible in death" (UNICEF 2000).

New threats to health include both reemergent and emergent infectious diseases as well as ever more prevalent chronic conditions (e.g., asthma, allergies, cancer, diabetes), a global water shortage, and a world food crisis. These threats are caused and exacerbated by the environmental changes wrought by global warming and other anthropogenic (human-caused) degradations of the environment (e.g., toxic emissions) and have now become substantial factors in human health and disease. Other dangers lurk and threaten to reverse the health improvements that have been made, especially in poor countries. For example, 40 new diseases have been identified since the 1970s, and in recent years alone, WHO has verified over 1,100 epidemic events worldwide. Moreover, WHO points out:

> The poorest of the poor, around the world, have the worst health. Those at the bottom of the distribution of global and national wealth, those marginalized and excluded within countries, and countries themselves disadvantaged by historical exploitation and persistent inequity in global institutions of power and policy-making present an urgent moral and practical focus for action. (2008:31)

A CONCEPTUAL JOURNEY

Where did the global health agenda come from? This question is important not only for historical reasons but also for conceptual ones. It is imperative to understand how the field of global health came to frame its particular understanding of health in the world. In everyday usage, when we talk about health, we often mean "individual health" (e.g., "Sarah has a sore throat."). Global health, by contrast, focuses on the epidemiological idea of **population health** and seeks to measure and compare the population health status of the nations and regions of the world using various morbidity and mortality indicators. "Population health" provides the conceptual framework for thinking about why some populations are healthier than others. It calls attention to the influential role of social and economic forces in combination with biological and environmental factors that shape the health of entire populations (e.g., adolescents worldwide, inhabitants of Nigeria, poor African Americans in New Orleans, women in Amazonia). Population health focuses on (1) the interrelated social and environmental conditions and social forces and trends that influence the health of populations over the life course and (2) identifying systematic variations in patterns of disease occurrence. It uses this knowledge to develop and implement health-related policies and programs designed to improve the health and well-being of populations of concern.

Tropical Medicine Era

Historically, population health emerged from the field of tropical medicine, itself a historic product of the eighteenth- and nineteenth-century European colonial encounter with the indigenous peoples of Africa, Asia, the Americas, and the Pacific Islands. Inherent in colonialism was an agenda of improving local on-the-ground conditions in colonial areas that facilitated the political and economic control of indigenous populations, their labor, and the natural resources of their homeland. Tropical medicine was intended to control local diseases that could hinder the extraction of colonial wealth. Disease was a major problem for Europeans in the tropics. West Africa, for example, was known in Britain as the "white man's grave." Consequently, the

initial objective of tropical medicine was protecting the health of European colonial administrators, traders, missionaries, and travelers from the assumed harmful effects of living both in a hot tropical environment and among indigenous inhabitants, usually peoples of color, who were believed to be unhygienic, immoral, and diseased.

One way of achieving the protection of colonial administrators and colonists and thereby promoting the colonial enterprise was "cleansing their newly acquired [territories], attempting to purify not only [their] public spaces, water, and food, but the bodies and conduct of the inhabitants" (Anderson 2006:1). The underlying imperialist ideology embedded in tropical medicine was the sense that medicine and health had a vital role to play in making the world safe for Europeans so that they might carry out their "burden" of ruling over and "civilizing" subordinated peoples and diminishing the innate propensity of these peoples and their environments to spread disease. Two of the most important targeted diseases were malaria and yellow fever, both of which took a tremendous toll on both the colonizers and the colonized.

The London School of Tropical Medicine founded in 1899 (known as the London School of Tropical Hygiene and Medicine after 1924) may be the most famous of the institutes devoted to infectious diseases. Medical researchers, physicians, nurses, and sanitary engineers were the primary personnel working toward better health (primarily for colonizers) in the colonies at this time. As advances in immunization and other disease-control methods became available, these benefits were extended to indigenous populations as gestures of good will that also advanced capitalism. As this historic tale reveals, public health is almost always very political, reflecting as much relationships among people as it does relations with nature or with disease.

International Health Era

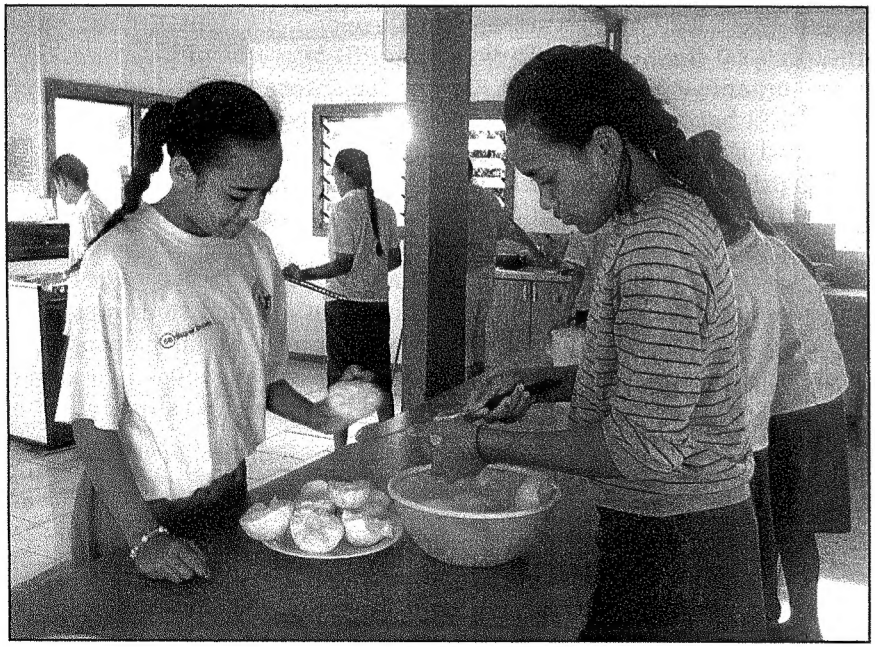
By the late nineteenth and early twentieth centuries, with the slow but not yet fully accomplished demise of colonialism, tropical medicine gave birth to the idea of "international health." While tropical medicine, whose concern was the special health problems of tropical regions, did not disappear, increasingly there was a concern for understanding and controlling the specific health problems that plagued the inhabitants of the different countries or regions of the world. In Western countries, initially, the term **international health** came to refer primarily to health practices, policies, and systems in developing nations, rather than to those in developed nations, and stressed the differences between countries more than their commonalities. Additionally, international health focused on bilateral foreign aid activities (e.g., USAID), rather than a collective international action, to control disease in the poor countries of the world, and favored medical missionary work (primarily Christian) in such countries.

As developed countries continued to extract raw materials from less developed countries even as the colonies were beginning to gain independence, private nonprofit foundations concerned with international health issues, such as the Rockefeller Foundation (founded in 1913), Save the Children (a war relief agency founded in 1919), and the Red Cross Societies began to address health internationally. The 1920s saw the establishment of the League of Nations Health Organization (LNHO). The LNHO began to collect, standardize, and disseminate vital and health statistics from around the world. Its publication, the *Weekly Epidemiological Record*, later continued by WHO, included information on infectious diseases, nutrition, social causes of morbidity and mortality, and chronic diseases. It was also at this time that private foundations, particularly the Rockefeller Foundation, began to work with the LNHO, a precedent that continues to this day. The outbreak of World War II (1939–1945) stopped most of these cooperative efforts, except for those directly related to the military. The United States was involved with the development and distribution of sulfonamides and penicillin to Allied forces. After the war, organizations that cover three key categories of assistance were established to address the continuing concerns of the industrialized nations about health and economic development in the less developed countries: (1) WHO, a *global health* organization within the United Nations (UN), (2) the International Monetary Fund (IMF), the World Bank (International Bank for Reconstruction and Development [IBRD]), and other multilateral *financial institutions*, and (3) *bilateral aid and development* organizations (e.g., US Agency for International Development [USAID]) based primarily in the developed countries. Other players included the big pharmaceutical companies, health insurance industries, private philanthropies, and many nongovernmental organizations (NGOs) (Birn et al. 2009). The stated goal of these organizations was to address issues of hunger, disease, and economic development. Yet, it should come as no surprise that the power structure reflected the goals and values of the industrialized nations and continues to do so today. Indeed, an important driver of international development programs at this time was concern about lesser developed countries turning to communism (as had happened in China) and slipping out of the capitalist world system.

Despite these factors, the field of international health really came into its own during this period (1950s–1980s). WHO was an organization with member states that could set health policy and target priorities for bettering health, particularly in the developing nations. WHO defined health as "a state of complete physical, mental and social well-being not merely the absence of disease or infirmity" (Constitution of the World Health Organization 2006:1) and its mission was "the attainment by all peoples of the highest possible level of

health." The primary focus of efforts in international health became the control or even elimination of the major scourges of the developing countries—infectious diseases and malnutrition—and improving child health, reproductive health, and water and sanitation conditions.

Eradication of small pox in 1980 is arguably one of the major achievements of WHO with respect to infectious diseases. Attempts to eradicate malaria were initially also very effective due to the use of the pesticide DDT but suffered major setbacks after DDT was banned because of the damage it was doing to the environment. The disease since has resurged almost everywhere, especially in sub-Saharan Africa. WHO's efforts to provide universal immunization against diphtheria, pertussis, tetanus, measles, polio, and TB through the Expanded Program on Immunization (EPI) have saved countless lives, and its child survival program, GOBI-FFF (growth monitoring, oral rehydration, breastfeeding, immunization, food supplementation, female literacy, and family planning), has made significant impacts. The Essential Drugs Program (EDP) identified some 200–500 vitally important drugs and still makes them accessible and affordable to those in need. The Global AIDS Program, while defending the human rights of people living with AIDS, focused narrowly on the importance of individual behavior change.



Making a culturally meaningful healthy lunch at Enuamanu School, Atiu, Cook Islands. (Julie Park)

In the early years, international health was heavily dominated by biomedicine and, except for water and sanitation projects, focused on narrowly defined programs (vertical or top-down approaches like EPI) and individual patients (stressing personal responsibility for health) rather than the broader social and economic issues that affect health (e.g., poverty, lack of health infrastructure and access to care). In 1978, WHO member nations signed the Alma Ata Declaration that called for health needs to be addressed as a fundamental human right with attention paid to the social origins of disease and advocated for the implementation of primary health care to achieve "health for all by the year 2000" (WHO 1981). This was a direct challenge to the status quo and the biomedical reductionism that had guided WHO to that point. The program, however, was undermined at every turn; by the 1980s, WHO had returned to the former strategy of "selective" primary health care. The tension between the philosophy of health implied in the vertical programs (e.g., malaria control) and the horizontal programs (e.g., primary health care for all), the narrow biomedical concerns about individual and social justice issues, and the retention of the status quo versus a new international economic order have been played and replayed over the history of WHO and, by the 1990s, had divided the organization.

Global Health Era

During the 1990s, the term *global health* was increasingly used to refer to health issues internationally. The use of global health paralleled the new economic term, *global economy*, which recognized the increasing systemic economic globalization of our planet. Global health also reflected a change in perspective that involved a conceptual shift from health issues and concerns between nations and regions to those that transcend national borders, such as socioeconomic class, ethnicity, gender, culture, and pandemics. To put it another way, the shift involved flows of capital, people, diseases, medicines, commodities, ideas, and practices that move relatively freely across our culturally constructed political boundaries. Recognition of the need for a global health perspective grew from the emergence of an awareness of the significance of the processes of "globalization" and global connectedness that increasingly are redefining human social worlds and experiences.

It was also in the 1990s that WHO's budget (formerly donations from member states) had become heavily dependent on extra-budgetary funding over which it had less control, and "by 1990 World Bank health project loans surpassed WHO's budget" (Birn et al. 2009:80). By the mid-1990s the bank was the "largest external funder of health" (over $1 billion) (Birn et al. 2009:82). WHO pushed for redistributive primary health care and attention to the social causes of poor health,

but this was contrary to the neoliberal economic policies (i.e., deregulation, privatization, and government downsizing) that have dominated the policies of the World Bank since the 1980s. The less WHO controlled the money spent on international health, the less impact it had on pushing forward its agenda for primary health care and social justice, and the more power the World Bank and related organizations had to set the global health agenda.

New key players in global health emerged in the 1990s. Private philanthropic organizations like the Bill and Melinda Gates Foundation (2000), whose budget has surpassed that of WHO, began to influence funding for global health. Such foundations set their own goals for health programming and spending and are accountable only to their board of directors. With such large budgets, they wield enormous influence in the global health arena. Add to these private foundations the many corporate foundations (e.g., Eli Lilly and Company Foundation, ExxonMobil Foundation), business interests (e.g., health insurance companies, pharmaceutical companies), and public-private partnerships (PPPs, e.g., Roll Back Malaria, Global Alliance for Improved Nutrition) and global health has become a province of organizations that, unlike WHO, are not accountable to any democratic body; instead, their global health policy is guided by their own self-interests. Furthermore, they tend to support short-term vertical programs and sacrifice the broader social justice goals of WHO to profit-making.

The extensive involvement of private entities in global health "is also evidenced by the recent formation of the H-8—WHO, UNICEF, UNFPA, UNAIDS, the World Bank, the GAVI Alliance, the Global Fund, and the Gates Foundation—which now hold meetings, like the G-8, in which private entities wield equivalent decision-making powers to public agencies" (Birn et al. 2009:109). WHO, however, continues to champion health as a human rights issue. Its recent publication, *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health: Final Report of the Commission on Social Determinants of Health,* focuses on the continuing social and economic inequalities that impact global health (WHO 2008).

Paralleling the rise of private and corporate interests in global health was the rise of the NGO. NGOs are private, nonprofit agencies that range from small, local grassroots organizations to large international organizations (e.g., International Planned Parenthood Federation). They include humanitarian organizations (e.g., CARE, Catholic Relief Services), relief groups (e.g., Red Cross), social and human rights organizations (e.g., Doctors Without Borders), developing-country NGOs, health and development think tanks, advocacy groups, university and hospital collaborations, research institutions and alliances, professional membership organizations (e.g., the American Public Health Association), and many smaller group or individual

efforts—all of which have a concern for improving global health. By the 1990s NGOs had become the major conduit for funding health initiatives in developing countries, bypassing government health institutions (Birn et al. 2009). The many NGOs often compete with each other for funds, hire local health providers away from national health service organizations, and undercut local planning and decision making. Since NGOs receive most of their funding from the major donors (e.g., World Bank, USAID, private foundations, multinational corporations), they are constrained by the dominant philosophies of those organizations and the same structural lack of accountability to the global citizenry.

Health as a Human Right

During the 1980s and 1990s, global health became characterized by a shift away from nation-state models of governance, cooperation, and decision making toward a more amorphous model in which there is no accountability framework. In this way, global health resembles the global economy. Both lack a structure of accountability to the global citizenry. Furthermore, the last three decades of globalization have seen the fragmentation of health policy, funding, and public accountability structures for global health that have resulted in increased inequity and declining health indicators in most developing countries. This has resulted in increased pressure from WHO, the UN, and many of those involved in global health to treat health as a human rights issue and to recognize that social and economic inequities underlie and are the most important factor in health inequities.

Article 25 of the UN's Universal Declaration of Human Rights (1948) clearly includes health and an adequate standard of living as human rights:

> (1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
>
> (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

The problem with the neoliberal agenda in global health today and the lack of accountability to the global public is, as Paul Farmer has said, based on an important distinction: "Health care can be considered a commodity to be sold, or it can be considered a basic social right. It cannot comfortably be both at the same time" (2003:175). We need a new system that breaks down disciplinary boundaries; recog-

nizes the contribution of biological, social, economic, and political factors on health; recognizes basic health care as a human right everywhere; and questions the free market model of health care as a commodity rather than a social necessity. This requires a shift from vertical to horizontal global health strategies and a commitment to ending global poverty.

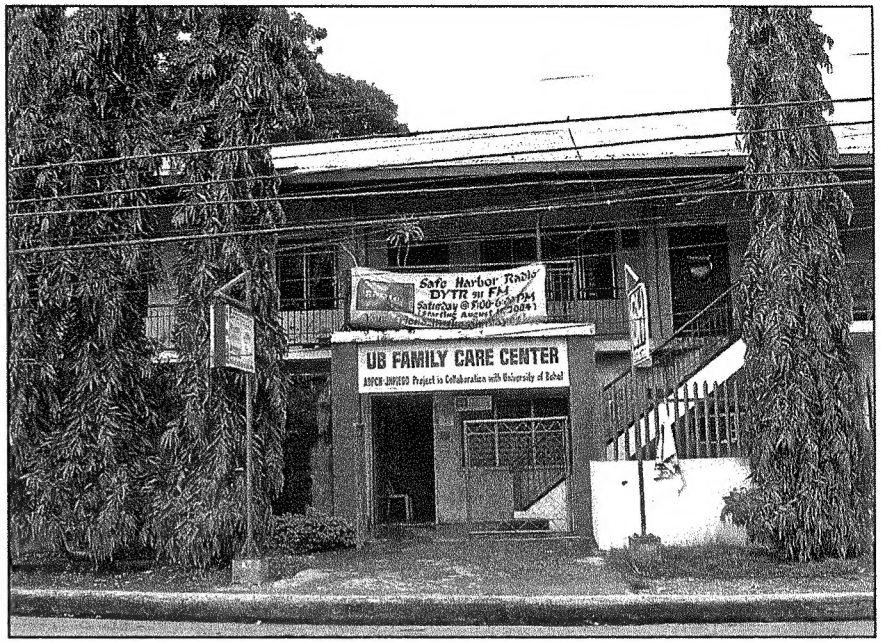
THE MISSION OF GLOBAL HEALTH

Global health can be defined as an interdisciplinary field of public health research, policy, and practice that measures and combats health problems worldwide, by identifying health patterns, defining determinants of health issues, and defining strategies for the alleviation of the global health burden. It places a priority on achieving equity in health across national borders and internal social divisions. Given our current global interconnectedness, the mission of the field of global health is to meet the health needs of all the people on the planet through increased cooperation, coordination, and effort.

Adopting a global health approach focuses health assessment, education, intervention, and policy efforts in a number of ways. First, it draws attention to the emergent integrations of economies and societies that are driven by new technologies (e.g., electronic communication) within the world system, including the impacts of new social relationships and institutions that link formerly separate and distinct localities. For example, the shift among youth worldwide from accepting a marriage that is arranged and not based on the couple being in love to desiring a marriage based on choosing and being in love with one's partner is a consequence of the global youth culture promoted by electronic media (music, film, Internet, Facebook, etc.).

Second, a global perspective on health highlights the global flow of pathogens, toxins, pharmaceuticals, and other commodities (including illicit products, like psychotropic drugs), weapons, and waste materials to new places. Illustrative of this point is the dumping of e-waste (e.g., worn out computers, other electronic communication devices, batteries, etc.) from developed regions in underdeveloped nations. Also of concern is the creation of new occupational spaces along borders between countries (e.g., factories or *maquiladoras* along the Mexico/US border, which sprang up after the passage of the North American Free Trade Agreement) that introduce occupational and environmental health risks. (e.g., abuse of female factory workers by their male supervisors).

Third, there are the health consequences of new social and cultural patterns, such as the massive short- or long-term movement of



Family Health Care Center Tagbilaran City, Bohol Province, Philippines. (Pamela Erickson)

workers to foreign lands in search of employment. In recent years, this migration has become highly gendered as developed regions seek caregivers for their homes, their children, their aged, and their sick. Sex workers (including children) are also in high demand in this global flow of bodies. The international demand for female workers has produced an array of new health issues from the spread of sexually transmitted diseases to the mental health problems produced by disrupted social relationships.

Finally, globalization is an uneven process: in some ways all nations develop similar health challenges (e.g., rising rates of asthma and other chronic diseases globally), while in other ways some nations face new local threats to health. Eastern Mediterranean populations are experiencing expanded threats from schistosomiasis, a chronic illness that can damage internal organs. This disease vector is found in contaminated water associated with water development projects designed and implemented for irrigation purposes. In Mexico newly created jobs refurbishing used car batteries from the US are associated with health problems stemming from exposure to toxic materials. As health patterns and threats change, access to health care remains uneven both among and within nations and regions of the world.

CONTOURS OF GLOBAL HEALTH TODAY

The world we live in is characterized by substantial differences in the quality and longevity of life both within and among nations and regions. Having a meaningful impact on these differences and improving health and well-being is the primary motivation for most people who work in global health. Understanding the nature and causes of health differences across populations begins with differentiating **health disparities** (differences in health) from **health inequities** (inequalities in health). Men and women, for example, have different health profiles, in part, because of anatomical reasons. At the same time, women on average live somewhat longer than men, especially in developed countries. These differences are not a consequence of social inequality among women and men and hence would be labeled health disparities. Additionally, populations may have health differences because of divergent cultural practices. Mark Nichter and Mimi Nichter (1996) report that in Bangladesh, Pakistan, Sri Lanka, and the Philippines many mothers delay seeking treatment for children with measles, which is an important cause of child death in many developing countries, because they fear that treatment keeps heat from leaving the body, slows down the normal progression of the disease, and turns the rash from a skin problem to a life-threatening internal illness. By contrast, many disease patterns and other threats to health reflect underlying social inequalities caused by discrimination, stigmatization, oppression, military activity, and lack of access to needed resources. Anthropologists increasingly refer to these kinds of factors as **structural violence** (Farmer 2009) because like war and interpersonal violence they take a significant toll on human life. Social epidemiologist Nancy Krieger, who studies health inequity, summarizes the importance of social inequalities:

> In a world where 2 of 5 of our planet's 6+ billion people lack sanitation and live on less than $2 a day . . . , where 1 in 5 lack access to clean water and live in extreme poverty on less than $1 a day, and where less than 1% of the world's adult population owns 40% of the world's wealth while 50% owns less than 1% [of the world's wealth], documenting and analyzing the links between impoverishment and population health remain a public health imperative. (2007:658)

This statement pinpoints one of the most important social determinants of both individual and population health, namely control over wealth within and across societies. Krieger further asserts:

> Social inequality kills. It deprives individuals and communities of a healthy start in life, increases their burden of disability and disease, and brings early death. Poverty and discrimination, inadequate medical care, and violation of human rights all act as powerful social determinants of who lives and who dies, at what age, and with what degree of suffering. (2005:15)

Health inequalities are inherently unfair and unjust and are increasingly being framed as a human rights issue.

While health inequalities are most notable in comparisons between wealthy and poor countries, significant inequalities characterize subgroups even in wealthy nations. Jack Geiger, a professor at the City University of New York Medical School, points out that "at no time in the history of the United States has the health status of minority populations—African Americans, Native Americans, and, more recently, Hispanics and several Asian subgroups—equaled or even approximated that of white Americans" (2002:417).

Social inequalities in health have multiple expressions, including

- Disproportionate or excess morbidity (i.e., disease and disability rates)
- Disproportionate or excess mortality (i.e. death rates)
- Decreased life expectancy
- Unequal access to health care
- Unequal access to other health-supportive resources (e.g., health insurance, good nutrition, a clean environment)

Historical and contemporary political-economic relations among nations are especially important sources of health inequalities. There are great differences in wealth between the developed and underdeveloped countries of the world, particularly in sub-Saharan Africa, where the annual per capita expenditure on health care in many nations is less than US$10 compared with US$2,000–$4,000 in more-developed countries. This differential is largely a consequence of the heavy debt many nations in sub-Saharan Africa owe to financial institutions in the developed nations; this debt precludes greater health care expenditures. Moreover, poor nations that have fallen into debt by borrowing money to fund development programs are under great pressure from lenders like the World Bank and USAID to limit government spending on health and social welfare programs as a condition of their continued ability to borrow.

It is important to understand the pathways by which structurally shaped life experiences and hardships result in biological (and health) effects in the body. Anthropologist William Dressler (1999, 2011) has been involved for many years in the study of the health impacts of perceived social inequities as mediated by the stress process. Dressler differentiates two types of social stressors with biological impacts: acute and chronic stressors. *Acute stressors* consist of sudden and often

unexpected events that adversely alter the fabric of day-to-day social life (e.g., a "natural" disaster such as Hurricane Katrina in 2005 or the Japanese tsunami and nuclear meltdown in 2011) and force individuals into a new set of social circumstances to which they must adjust. *Chronic stressors* are comprised of ongoing problems in achieving emotionally satisfying experiences and fulfilling major social roles that are central to individual identities (e.g., head of family, community member, mother). Under conditions of stress, there is a set of neuroendocrine responses that prepare the body for action (the so-called "fight or fight" responses). In cases of chronic stress, various "readiness" responses, such as heightened blood pressure, never fall back to original levels but rather reset continually to ever-higher levels that ultimately can lead to significant disease (e.g., cardiovascular problems, stroke). This is not, however, simply a biological process, Dressler argues, because symbolic stimuli and cultural systems of meaning are critical to the process.

One type of stress that Dressler (2011) has found to be common among the poor is caused by the experience of relative deprivation associated with frustrated consumer aspirations—in other words, the stress experienced from wanting and culturally valuing things that you cannot have or achieve because of social barriers. This he calls **cultural inconsonance**. Dressler's research suggests that the more closely individuals approximate in their own behaviors the shared expectations of local cultural models, the better their health status and vice versa. In research in Latin America and the West Indies, Dressler (1999) found high blood pressure was associated with cultural inconsonance. Another group of anthropological researchers led by Clarence Gravlee (Gravlee et al. 2005) used a similar approach to examine the association of skin color and blood pressure in Puerto Rico and found that having darker skin (as defined culturally in Puerto Rico) and having lower socioeconomic status interact to produce high blood pressure. Overall, this body of research affirms that the inability of individuals to achieve their culturally constituted life goals has profound adverse health impacts.

CASE STUDY
Diabetes among the Tohono O'odham

There are intense debates among health officials, policy makers, researchers, and others over the causes of health differences across populations. A case in point is the distribution of diabetes (particularly type 2 diabetes), which is an incurable, debilitating, and potentially lethal disease. Diabetes has a disproportionate effect on the poor, people of color, and disadvantaged indigenous peoples around the world. Notably, American Indians have one of the highest rates of type 2 diabetes. The indigenous Tohono O'odham people of the

Sonoran Desert of south central Arizona, for example, suffer from more than seven times the US diabetes national average and have the highest known prevalence of diabetes, with 50 percent of the adult population having diabetes (Smith-Morris 2008).

Although diabetes is treatable (e.g., insulin injection, oral medications, dietary controls), people with diabetes are two to four times more likely to develop heart disease or have a stroke, and three times more likely to die of complications from influenza (including H1N1) or pneumonia than nonsufferers. Blindness, amputations, and kidney failure are common in the late stages of the disease, resulting in a reduced life expectancy of five to ten years on average. As a result, diabetes has had a pronounced impact on the lives and life experiences of the O'odham people.

Some researchers believe that the O'odham may be genetically predisposed to diabetes, which, combined with a poor diet and lack of adequate exercise, have led to high rates of the disease. Other researchers, however, point out that diabetes was virtually nonexistent among the O'odham 100 years ago (when they would have had more or less the same genetic composition as today). At the beginning of the twentieth century, a physician and anthropologist visiting the Gila River Reservation recorded only one case of diabetes. By 1965, there were 558 known cases in a population of about 28,000 people. Today, diabetes cases among the O'odham number in the thousands. What changed in those 100 years that might account for this radical health transformation?

Those who question the genetic explanation argue that while diet and exercise certainly do matter in the development of diabetes, these behaviors must be understood as more than individual decisions or as reflections of personalities. In addition, we must consider the contexts of people's day-to-day lives: what foods are available to them, what is their socioeconomic status, to what degree do they have a sense of control over their lives, what challenges are they facing in the wider world, and what kinds of resources do they have to cope with these challenges at the population and household levels?

In this light, it is noteworthy that the onset of the O'odham diabetes epidemic coincides with the local damming of the Gila River and other rivers for upstream water use by farmers and by the city of Phoenix. The diversion of water from the O'odham reservation destroyed their agriculture and livelihood, plunging them into poverty. Anthropologists like Mariana Ferreira and Gretchen Lang (2006) argue that for groups like the O'odham, the trauma of historical events, combined with continuing inequities in everyday social life relative to the dominant society, produce a chronic stress response. Over time, this bodily response to continued exposure to stress (as opposed to short-term exposure for which our bodies seem well adapted) weakens the body's immune system, heightens blood-sugar levels, and results in the overproduction of adrenaline cortisol

and other hormones related to diabetes. From this vantage, the prevalence of diabetes among the O'odham reflects the biological and health consequences of social inequality and structural violence.

THE ANTHROPOLOGICAL APPROACH

Since the beginning of the field in the nineteenth century, anthropologists have reported on health-related features of human social life under varied social, environmental, and economic conditions. Anthropological interest in health and illness gained considerable momentum in response to the rapidly changing health and social conditions that emerged after World War II, when international health became the focus of the newly formed World Health Organization (WHO). From the 1950s to the 1980s the focus was on improving the health of people within individual nations by strengthening their biomedical prevention and treatment capacities.

In this book, we emphasize the anthropological perspective on global health for three reasons. First, because of its ethnographic approach to knowledge generation and its enduring concern with human subjectivities and insider (**emic**) points of view, the anthropological perspective draws attention to what the health statistics alone cannot tell us. It does this by ensuring that people—as experiencing, feeling, and self-aware beings—are not lost in the epidemiological and public health analysis of health statistics, infant mortality rates, or other quantitative measures. For example, while it is important to understand the patterns of diffusion and growing number of cases of an infectious disease like dengue fever (discussed in chapter 3), as well as the role of global economic and climate changes on the spread of this disease, it is also necessary to appreciate how dengue interacts with human experience, local understandings, and culturally shaped behaviors, and how all of these factors influence risk of infection and social response to infection once it occurs.

In the barrio of Villa Francisca in the Dominican Republic, anthropologists Jeannine Coreil, Linda Whiteford, and Diego Salazar (1997:165) found that residents hold generally fatalistic attitudes about dengue, believing that there is not much they as individuals, as families, or as a community can do about it because the environment is beyond their control. This fatalism is based on their lived-experience in their local environment and what they are able and not able to control. This worldview shapes the responses of the people of Villa Francisca to dengue in ways that must be considered in attempting to prevent this widespread, painful, and potentially lethal disease. Another example of the effect of cultural beliefs on health comes from

Northern Nigeria where Renne (2006) found that some parents refused to allow their children to be inoculated against polio because of the belief that the vaccine was contaminated with HIV and antifertility drugs. Notes Vinay Kamat, "Health planners must consider community beliefs and practices when developing and implementing health policies, as communities must be reasonably convinced of their value before they will embrace change" (2009:56). The anthropological approach encourages understanding of "what actually goes on in the household unit" (Mull 2000:323), as well as during conversations at community gatherings, encounters on the plaza, chance meetings in the local marketplace, and in the many other spaces of meaningful human interaction.

The second reason to think about global health anthropologically is that it offers a means of viewing in careful detail the day-to-day health challenges people face in different locations and in diverse cultural contexts. The anthropological perspective equips students with the conceptual tools needed to see beyond dominant assumptions to assess the actual role of local conditions and social experiences in the making of health and sickness. This is important because disease understandings develop at the local level, as do social responses to limit adverse health outcomes through social and cultural adjustments. Medical anthropologists use the term *idiom of distress* to label social awareness of illness symptoms as culturally appropriate behavioral expressions of anguish and anxiety in response to distressing life events. In many parts of Latin America and among Latino populations in the US, for instance, *ataque de nervios* (attack of nerves) is a culturally recognized illness that, rather than constituting evidence of a mental health problem (e.g., a panic disorder) as it sometimes has been interpreted by psychiatry, may serve as a mechanism for culturally approved ventilation of social suffering (Guarnaccia et al. 2010). Awareness of the local acceptance of ataque de nervios as a normal and appropriate reaction to intense distress can avoid miscommunication, misunderstanding, misdiagnosis, and the misallocation of resources in global health programming.

The **anthropological paradigm** therefore offers a useful corrective to the tendency in global health to view both disease and intervention in narrowly medical and technical terms and not to pay sufficient attention to the human elements of cultural beliefs and behaviors in the domain of health. It is critical to consider both the beliefs and the practices of the lay community and those of health care providers as well.

Finally, the anthropological perspective offers a framework for situating the local within political-economic and political-ecological global contexts and processes that include the structural inequalities and adverse world-changing forces of economic globalism and plane-

tary warming. The field of global health is especially concerned with improving health in the poor nations of the world, which tend to have the worst health profiles. Those who embrace the anthropological perspective are concerned that "unreflexive depictions of [local] cultural practices as casual factors" (Craddock 2004:3) often mean that victims are blamed for inadequate outcomes of health measures. Karen Moland and Astrid Blystand say that "the close attention anthropology can give to people's practical lives and their experiences generates substantial knowledge of the political-economic, and by extension, the moral-ethical dimensions of the topic at hand" (2009:475). Anthropology recognizes the importance of investigating the social embeddedness of disease vulnerability as a determinant of the health. This pathway often leads beyond dominant viewpoints, established epidemiological conceptions, and prevailing "top-down" models of health intervention to new ways of understanding and new, community-driven and participatory strategies of health promotion.

As a biocultural discipline, anthropology focuses on the ways that culture and biology interact. Contemporary research suggests that our health—even our biology—can be significantly influenced by stress, and the stress of enduring injustice and social subordination is often reflected in the body's ailments (Galhardo et al. 2007). Research by Janet Rich-Edwards, Nancy Krieger and their colleagues (2001) found that chronic stress intensifies the risk of preterm delivery by raising levels of placental corticotropin-releasing hormone (CRH). Women who have been the targets of racism or interpersonal violence may be at special risk of preterm delivery and its attendant health challenges for newborns. Similarly, anthropogenic climate change and its consequences, such as an increase in the frequency of extreme weather, can be especially harsh on health in low-income communities and nations that lack the resources to respond quickly or effectively to climate-related disasters. The World Bank (2012) defines low-income countries as those with gross national income per capita of under $1,025 in 2011. Even developed countries lack appropriate resources to deal with, severe storms. In the United States in 2005, Hurricane Katrina stretched our capacity to respond with timely and adequate disaster relief, and those who suffered most were the poor, the elderly, and people of color.

Global climate change and other forms of anthropogenic environmental degradation and their causes, effects, and amelioration are intimately related to culture (Crate 2009). Health is strongly affected by the environment in which we live and by the many ways culture, society, and global political-economic systems interface with that environment (Baer and Singer 2009; Nichter 2008). Complex links intertwine biology and culture, the local and the global, developed and underdeveloped nations, and human societies and the physical worlds

they inhabit. Medical anthropologists have long recognized the multiple levels, from individual to global, that affect health and illness. Understanding the complexity of global health issues is essential to addressing them. Anthropology can help us learn to form a creative and holistic vision for improving global health.

An anthropological paradigm reveals that while great strides have been made in improving the health of many people around the world over the last 60 years, human impacts on the environment, violent social conflict, and increasing social inequality are diminishing the success of global health initiatives and threaten to reverse them completely in many areas. These "adverse forces in health" impede efforts to reduce global human social and physical suffering. Hundreds of millions of people, as a result, especially those living in low- and middle-income countries, but the poor of wealthy countries as well, continue to become ill, to be disabled by, or to perish from preventable or treatable diseases. In many countries, nutrition and the health of the poor have improved only slowly. In others they have declined as a result of the HIV/AIDS pandemic. Enormous inequalities in health status and access to health services prevail within and across nations.

CONCLUSION

Health is more than an individual matter. Who we are, where we live, what resources are available to us, how we are treated in society, how equitable our societies are, how clean our environments are, the state of our living and working conditions, and how much control we have over our lives all matter a great deal. There is a growing literature documenting the deleterious effects on health of extreme inequities in wealth and feelings of relative deprivation. Systemic and persistent health disparities are everywhere linked to underlying inequalities in power and resources, and these are political issues that need to be considered in global health policy (Birn et al. 2009). A major goal of this book is to provide readers with the skills to understand these complex issues and to think about realistic solutions within a critical, holistic, and culturally informed anthropological framework.

Global Health

An Anthropological Perspective

Merrill Singer
University of Connecticut

Pamela I. Erickson
University of Connecticut

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